

**Claims**

Claims 1-20 (canceled).

Claim 21 (original): A method of making a semiconductor device comprising:  
providing a substrate;  
forming a first insulation layer on the substrate;  
forming a nucleation layer on the first insulation layer;  
patterning the nucleation layer to cover the nucleation layer such that portions of the nucleation layer remain exposed;  
forming nanotubes on the exposed portions of the nucleation layer, the nanotubes oriented to be substantially vertical in relation to the substrate;  
forming an insulative layer over exterior walls of the nanotubes;  
forming rings of conductive material about the exterior walls of the nanotubes;  
and  
forming a second insulation layer over the exterior walls of the nanotube.

Claim 22 (original): A method of making an electrical interconnect in a semiconductor device comprising:  
providing a substrate having a first trace layer;  
forming a nucleation layer on the substrate;  
patterning the nucleation layer such that a portion of the nucleation layer remains exposed;  
forming a nanotube on the exposed portion of the nucleation layer, the nanotube having a lower end connected to the first trace layer;  
forming an oxide layer over exterior walls of the nanotube and over the nucleation layer;  
patterning the oxide layer to expose an upper end of the nanotube; and  
forming a second trace layer such that the upper end of the nanotube is connected thereto.

Claims 23-29 (canceled).